VG4 Series Pressurized Environmental Housing Module

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BOSCH
Invented for life

- Maximum environmental protection against dust, smog, salt air and humidity
- Meets IP67 and NEMA 4X specifications
- Maintains a dry, clean atmosphere for camera, lens, and pan/tilt/zoom (PTZ) mechanism
- Extended temperature range
- Compatible with all AutoDome modules and accessories

The Bosch VG4 Series Pressurized Environmental Housing module protects a VG4 AutoDome Modular Camera System from the elements, both natural and manmade. It is the ideal surveillance solution for applications that require frequent wash-down, including traffic, transit, bridges, tunnels and coastal installations where salt, moisture, dust, insects and fumes threaten the long-term operation of the camera. The pressurized housing module is the ultimate way to protect your surveillance camera investment from the environment.
The Pressurized Environmental Housing module is available as part of a VG4 500i Series EnviroDome pendant assembly (power, mounting, and fiber optic accessories must be ordered separately). In addition, the Pressurized Environmental Housing module can be ordered separately and be fitted to an existing VG4 EnviroDome.

Functions

This rugged pressurized housing, combined with the AutoDome Modular Camera System, maintains peak performance in the worst of conditions. The IP67 rated pressurized dome is the ultimate way to protect the camera from harsh environmental conditions.

Image control and quality are integral aspects of any outdoor surveillance system. The VG4 Pressurized Environmental Housing option offers the same lenses, 26x and 36x, as the standard VG4 500i series, and offers a full 12x digital zoom once the end of the optical zoom is reached. In addition, the scaling feature ensures optimal control for viewing at all zoom settings.
To enhance sensitivity when night falls, the day/night AutoDome automatically switches from color to monochrome by removing the infrared filter. Whether you program the camera to switch automatically, or use the manual switch, the result is optimal camera function, day or night. This feature automatically reduces the shutter speed to as little as one second, increasing sensitivity by more than 50 times, even in the darkest conditions.
Remote control, configuration and updates can be performed over the video cable (coax or passive UTP) when using Bilinx-compatible control and configuration devices (such as the VP-CFGSFT configuration tool or the LTC 8016 Allegiant Bilinx Interface).

AutoDomes equipped with the optional TCP/IP Communications Module use an advanced H.264 encoder to create DVD-quality streaming video across a local or a wide area network, and can simultaneously stream CVBS video via coaxial cabling to support existing analog equipment.
The menu for these devices can display multiple languages, including: English, Czech, Dutch, French, German, Italian, Polish, Portuguese, Spanish and Russian.

Certifications and Approvals

Environmental	IP67, NEMA 4X
Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations, including EN50130-4 and EN50121-4
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards

Installation/Configuration Notes

VG4 Pressurized Environmental Housing Module

VG4-MHSG-NC	Pressurized Environmental Housing Module, Clear Bubble
VG4-MHSG-NT	Pressurized Environmental Housing Module, Tinted Bubble

VG4 500i Pressurized EnviroDome Kits

VG4-513-NCS	26X Day/Night Analog PAL Camera with Pressurized Environmental Housing Module, Clear Bubble
VG4-513-NCE	26X Day/Night IP PAL Camera with Pressurized Environmental Housing Module, Clear Bubble
VG4-514-NCS	26X Day/Night Analog NTSC Camera with Pressurized Environmental Housing Module, Clear Bubble
VG4-514-NCE	26X Day/Night IP NTSC Camera with Pressurized Environmental Housing Module, Clear Bubble
VG4-523-NCS	36X Day/Night Analog PAL Camera with Pressurized Environmental Housing Module, Clear Bubble
VG4-523-NCE	36X Day/Night IP PAL Camera with Pressurized Environmental Housing Module, Clear Bubble
VG4-524-NCS	36X Day/Night Analog NTSC Camera with Pressurized Environmental Housing Module, Clear Bubble
VG4-524-NCE	36X Day/Night IP NTSC Camera with Pressurized Environmental Housing Module, Clear Bubble

Technical Specifications

Mechanical

Weight	2.23 kg (4.92 lb)
Pan Range	360° cont.
Tilt Angle	18° above horizon
Variable Speed	0.1°/s-120°/s
Pre-position Speed	Pan: 360°/s Tilt: 100°/s
Preset Accuracy	± 0.1° typ.
Nitrogen Fill Valve	Schrader fill valve
Recommended Internal Pressure	62.05 kPa (9.0 psi) to 75.84 kPa (11.0 psi)
Maximum Internal Pressure	75.84 kPa (11.0 psi) ± 5%
Estimated Pressure Duration	6 months

Electrical

Power	21-30 VAC 50/60 Hz
Power Draw (typical)	
Analog Model	51 W (Add 16 W if using VG4-SHTR-XT kit)
Ethernet Model	55 W (Add 16 W if using VG4-SHTR-XT kit)

Environmental

Humidity	0% to 100% relative, condensing
Ingress Protection	IP67 (NEMA 4X)
Operating Temperature	–40°C to 60°C (–40°F to 140°F)
Storage Temperature	–40°C to 60°C (–40°F to 140°F)

VG4 500i Series Camera Modules

Camera 36x Day/Night

Imager	1/4 in. Exview HAD CCD
	(752 x 582 PAL)/(768 x 494 NTSC)
Lens	36x Zoom (3.4 –122.4 mm) F1.6 to F4.5
Focus	Automatic with manual override
Iris	Automatic with manual override
Field of View	1.7° to 57.8°
Video Output	1.0 Vp-p, 75 Ohm

Gain Control	Off/Auto (with adjustable limit)	
Synchronization	Line-Lock (–120° to 120° vertical phase adjust) or internal crystal	
Aperture Correction	Horizontal and vertical	
Digital Zoom	12x	
Horizontal Resolution	540 TVL (NTSC, PAL) typical	
Sensitivity (typical) [5]	**30 IRE**	**50 IRE**
Day Mode		
SensUp Off	0.66 lx	1.4 lx
SensUp On (1/4) (15x)	0.033 lx	0.083 lx
Night Mode		
SensUp Off	0.166 lx	0.33 lx
SensUp On (1/4) (15x)	0.0065 lx	0.0164 lx
Electronic Shutter Speed	1 to 1/10,000	
SNR	>50 dB	
White Balance	2000 K to 10,000 K	

5 F1.6, 1/60 (1/50) shutter, max AGC.

Camera 26x Day/Night

Imager	1/4 in. Exview HAD CCD	
	(752 x 582 PAL)/(768 x 494 NTSC)	
Lens	26x Zoom (3.5 –91.0 mm) F1.6 to F3.8	
Focus	Automatic with manual override	
Iris	Automatic with manual override	
Field of View	2.3° to 55°	
Video Output	1.0 Vp-p, 75 Ohm	
Gain Control	Off/Auto (with adjustable limit)	
Synchronization	Line-Lock (–120° to 120° vertical phase adjust) or internal crystal	
Aperture Correction	Horizontal and vertical	
Digital Zoom	12x	
Horizontal Resolution	NTSC: 470 TVL, typical PAL: 480 TVL, typical	
Sensitivity (typical) [6]	**30 IRE**	**50 IRE**
Day Mode		
SensUp Off	0.5 lx	1.0 lx
SensUp On (15x)	0.0052 lx	.013 lx
Night Mode		
SensUp Off	0.10 lx	0.26 lx
SensUp On (15x)	0.0013 lx	0.0026 lx
Electronic Shutter Speed	1 to 1/10,000	
SNR	>50 dB	
White Balance	2000 K to 10,000 K	

6 F1.6, 1/60 (1/50) shutter, max AGC.

VG4 Series General Specifications

Surge Suppression

Protection on Video	Peak current 10 kA (Gas Tube Arrester), peak power 1000 W (10/1000 µ)
Protection on RS-232/485, Biphase	Peak current 10 A, peak power 300 W (8/20 µ)
Protection on Alarm Inputs	Peak current 17 A, peak power 300 W (8/20 µ)
Protection on Alarm Outputs	Peak current 2 A, peak power 300 W (8/20 µ)
Protection on Relay Outputs	Peak current 7.3 A, peak power 600 W (10/1000 µ)
Protection on Power Input (Dome)	Peak current 7.3 A, peak power 600 W (10/1000 µ)
Protection on Power Output (Arm Power Supply)	Peak current 21.4 A, peak power 1500 W (10/1000 µ)

Miscellaneous

Sectors/Titling	16 independent sectors with 20-character titles/ sector
Camera Setup/ Control	Biphase, RS-232, RS-485, Bilinx[7] (coax)
Communications Protocols	Biphase, Bilinx[8], Pelco P, and Pelco D
Pre-positions	
500 Series	99, each with 20-character titles
Tours	
Guard Tours (500/300 Series)	Two (2) types of tours: • Recorded tours - two (2), total duration 15 minutes • Preset tour - one (1), consisting of up to 99 scenes, consecutively and one (1) customized up to 99 scenes
Supported Languages	English, Czech, Dutch, French, German, Italian, Polish, Portuguese, Russian and Spanish

7 Bilinx not available on Ethernet models.

Cable Compensation		
Max Distance	With Pre-comp OFF	With Pre-comp ON
RG-59/U	1000 ft (300 m)	2000 ft (600 m)

RG-6/U	1500 ft (450 m)	3000 ft (900 m)
RG-11/U	2000 ft (600 m)	4000 ft (1200 m)
Cat 5/UTP (Passive receiver)	750 ft (225 m)	1500 ft (450 m)

User Connections

Power (Camera)	21-30 VAC, 5/60 Hz
Power (Heater)	21-30 VAC, 50/60 Hz
Biphase ±	Control Data
Audio Line In[8]	9 K Ohm typ, 5.5 Vp-p max
RS-232 RX/TX or RS-485 ± - optional control data (dip switch selectable)	
Video	BNC/UTP[9]
EOLR Alarm Inputs (2)	Programmable for "normally open", "normally closed", "normally open-supervised", "normally closed-supervised"
Alarm Inputs (5)	Programmable for "normally open" or "normally closed"
Relay Out (1)	Dry contact output rating: 2 A @ 30 VAC
Open Collector Outputs (3)	32VDC@150 ma max

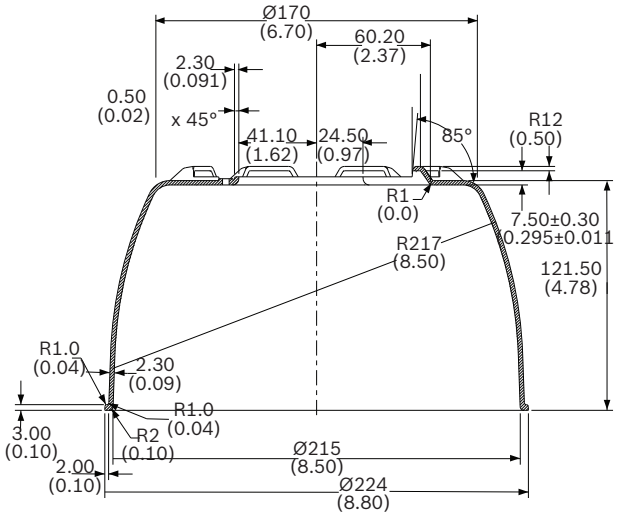
8 With Ethernet models, the Biphase ± can optionally be used as the audio line in connector.

9 Ethernet models have no UTP analog output only BNC (coax).

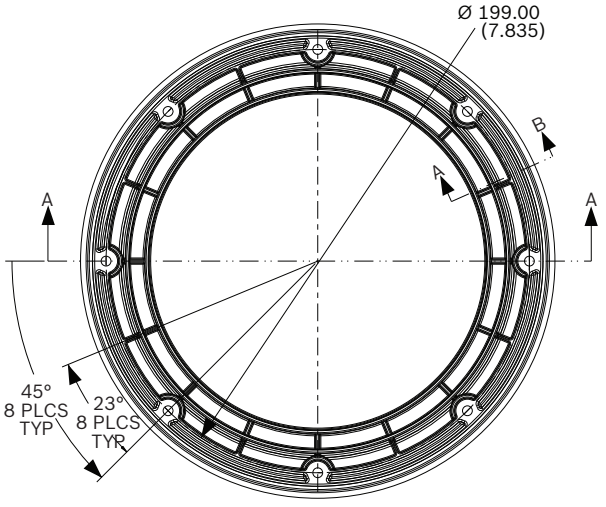
VG4 Series Mounts and Accessories

Pendant Arm Mounts	
Wall Arm (No Transformer)	VG4-A-PA0N
Wall Arm (120/230 VAC Transformer)	VG4-A-PA1N/ VG4-A-PA2N
Wall Arm (No Transformer with Fiber Optics)	VG4-A-PA0FN
Wall Arm (120/230 VAC Transformer and Fiber Optics)	VG4-A-PA1FN/ VG4-A-PA2FN
Optional Mounting Plates for Arm Mounts	
Corner Mounting Plate	LTC 9542/01
Mast (Pole) Mounting Plate	LTC 9541/01
Pendant Pipe Mounts	
Pipe Mount Cap	VG4-A-9543N
Pendant Roof Mounts	
Roof (Parapet) Mount	VG4-A-9230
Optional Mounting Plates for Roof Mounts	
Flat Roof Adapter for Parapet Mount	LTC 9230/01

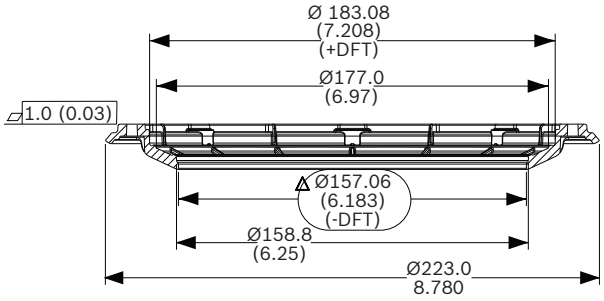
Power Supplies	
Outdoor Power Supply Box (120/230 VAC Transformer)	VG4-A-PSU1 / VG4-A-PSU2
Outdoor Power Supply Box (120/230 VAC Transformer and Fiber Optics)	VG4-A-PSU1F / VG4-A-PSU2F
Heater/Blower Module	
Extended temp heater module extends temperature range to – 60°C (–76°F) for EnviroDome only	VG4-SHTR-XT



Pressurized Environmental Housing – Side View



Bubble Support Ring – Bottom View



Bubble Support Ring – Side View

Ordering Information

VG4-MHSG-NC Pressurized Environmental Housing Module
Pressurized environmental housing for VG4 AutoDome Modular Camera System, includes a clear high-resolution bubble
Order number **VG4-MHSG-NC**

VG4-MHSG-NT Pressurized Environmental Housing Module
Pressurized environmental housing for VG4 AutoDome Modular Camera System, includes a tinted high-resolution bubble
Order number **VG4-MHSG-NT**

VG4 Series Kit with Pressurized Environmental Housing
Contact your Bosch Security Systems, Inc. representative for complete ordering information for the VG4 Series AutoDome Modular Camera System with the Pressurized Environmental Housing.
Order number **VG4 Series**

Represented by:

Americas:
Bosch Security Systems, Inc.
130 Perinton Parkway
Fairport, New York, 14450, USA
Phone: +1 800 289 0096
Fax: +1 585 223 9180
security.sales@us.bosch.com
www.boschsecurity.us

Europe, Middle East, Africa:
Bosch Security Systems B.V.
P.O. Box 80002
5617 BA Eindhoven, The Netherlands
Phone: + 31 40 2577 284
Fax: +31 40 2577 330
emea.securitysystems@bosch.com
www.boschsecurity.com

Asia-Pacific:
Robert Bosch (SEA) Pte Ltd, Security Systems
11 Bishan Street 21
Singapore 573943
Phone: +65 6571 2808
Fax: +65 6571 2699
apr.securitysystems@bosch.com
www.boschsecurity.asia

China:
Bosch (Shanghai) Security Systems Ltd.
201 Building, No. 333 Fuquan Road North IBP
Changning District, Shanghai
200335 China
Phone +86 21 22181111
Fax: +86 21 22182398
www.boschsecurity.com.cn

America Latina:
Robert Bosch Ltda Security Systems Division
Via Anhanguera, Km 98
CEP 13065-900
Campinas, Sao Paulo, Brazil
Phone: +55 19 2103 2860
Fax: +55 19 2103 2862
al.securitysystems@bosch.com
www.boschsecurity.com

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